

## **EXHIBIT 4**

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

PATENT NO. : 4,818,816

DATED : April 4, 1989

Page 1 of 6

INVENTOR(S) : Petitou, et al.

It is certified that error appears in the above—identified patent and that said Letters Patent is hereby corrected as shown below:

The following should be added to the title page under Foreign Application Priority Data

FOREIGN/PCT APPLICATIONS	FRANCE	8108472	04/28/81
	FRANCE	8200621	01/15/82
	FRANCE	8201575	02/01/82
	FRANCE	8202526	02/16/82
	FRANCE	8209392	05/28/82
	FRANCE	8210892	06/22/82
	FRANCE	8210891	06/22/82
	FRANCE	8211679	07/02/82
	FRANCE	8213804	08/06/82
	FRANCE	8215803	09/20/82
	FRANCE	8215804	09/20/82
	FRANCE	8218003	10/27/82
	PCT	PCT/FR82/0076	04/28/82

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

PATENT NO. : 4,818,816

DATED : April 4, 1989

Page 2 of 6

INVENTOR(S) : Petitou, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Claim 13, line 19, at Col. 73, line 58 should read:

"3. an orthoester formed between carbon 1 and carbon 2 of a uronic acid unit."

Claim 29, line 19, at Col. 77, line 46 should read:

"3. an orthoester formed between carbon 1 and carbon 2 of a uronic acid unit."

Claim 49, line 27, at Col. 85, line 18 should read:

"3. an orthoester formed between carbon 1 and carbon 2 of a uronic acid unit."

Claim 14, line 18, at Col. 73, line 9, should read:

"4.  $\text{OC}(\text{NH})\text{CCl}_3$ ."

Claim 30, line 18, at Col. 78, line 3, should read:

"4.  $\text{OC}(\text{NH})\text{CCl}_3$ ."

Claim 48, line 25 at Col. 84, line 34, should read:

"2. O-lower imidoyl"

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 4,818,816

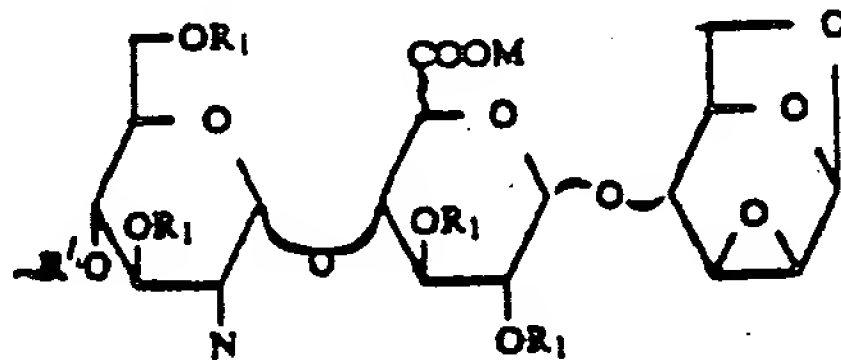
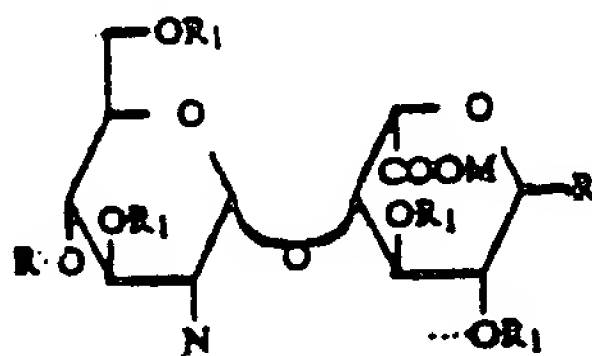
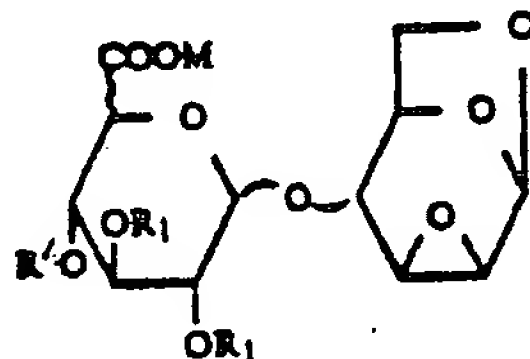
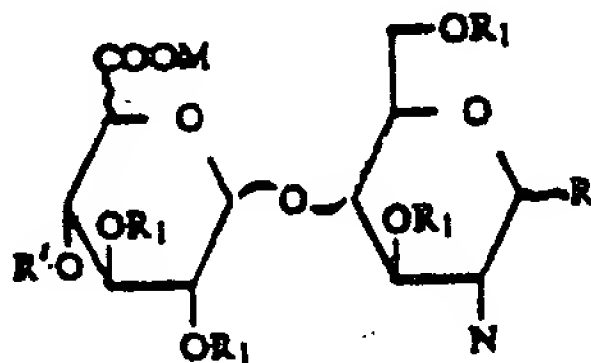
DATED : April 4, 1989

Page 3 of 6

INVENTOR(S) : Petitou, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At Col. 80, compounds I - IV should be:



UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 4,818,816

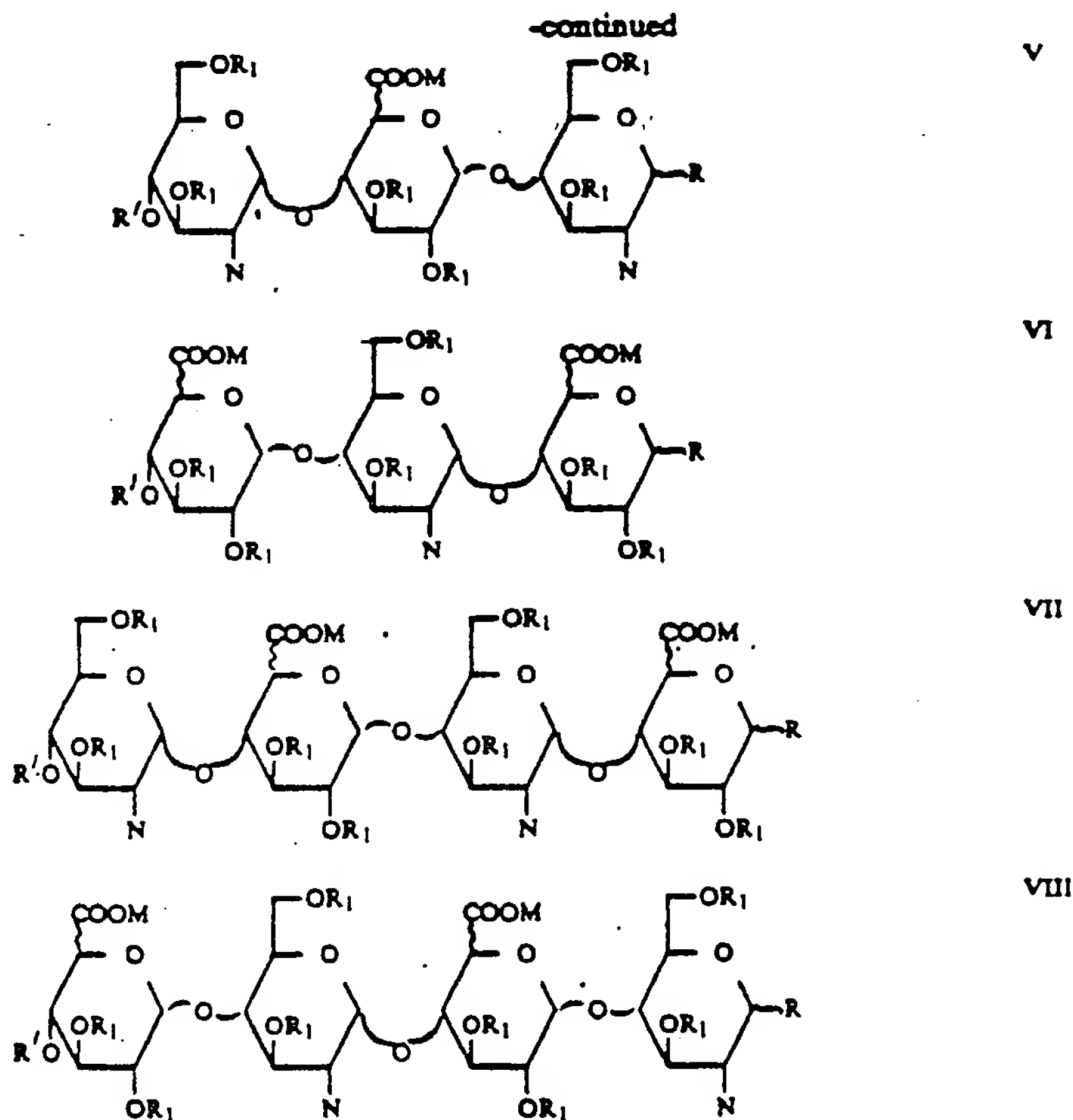
DATED : April 4, 1989

Page 4 of 6

INVENTOR(S) : Petitou, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At Col. 81, compounds V - VIII should be:



UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 4,818,816

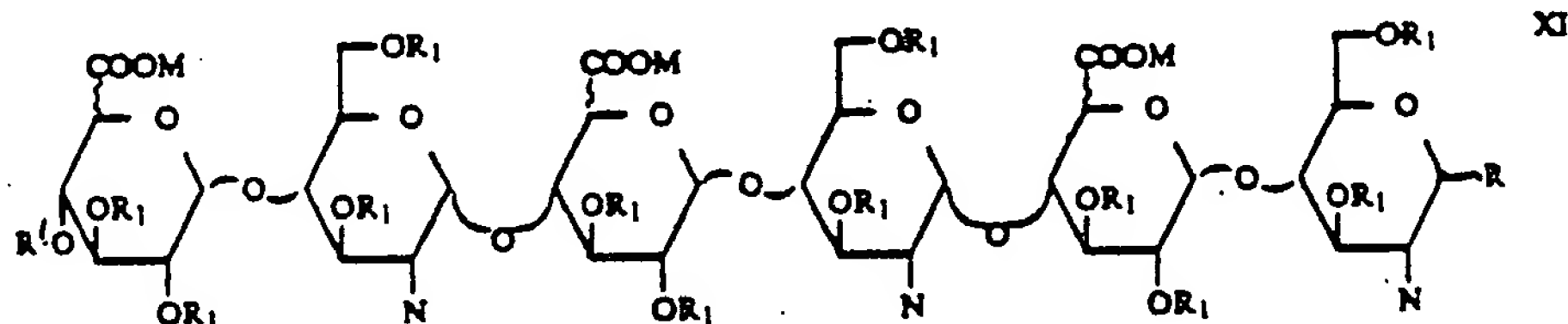
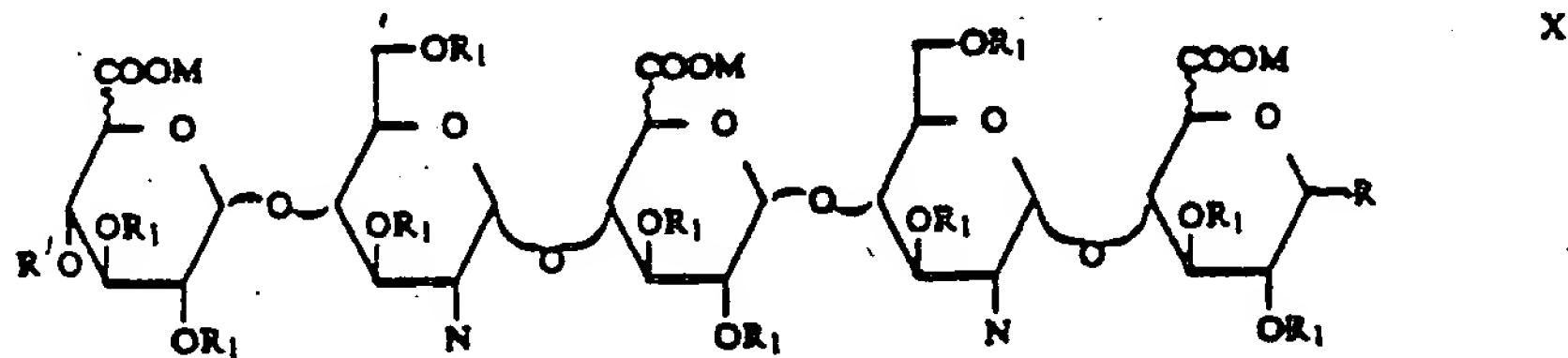
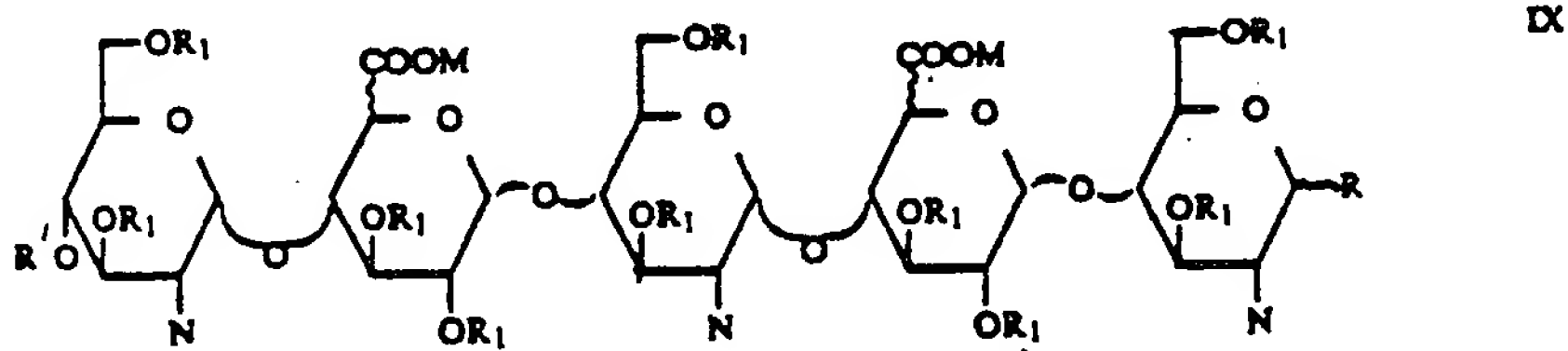
DATED : April 4, 1989

Page 5 of 6

INVENTOR(S) : Petitou, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At Col. 81, compounds IX - XII should be:



UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

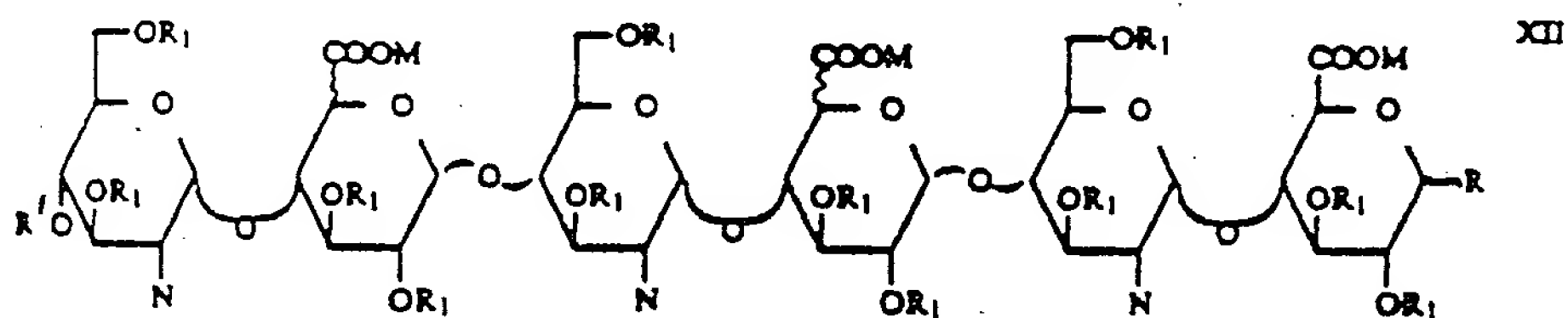
PATENT NO. : 4,818,816

DATED : April 4, 1989

Page 6 of 6

INVENTOR(S) : Petitou, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



Signed and Sealed this  
Seventeenth Day of December, 1991

*Harry F. Manbeck, Jr.*

HARRY F. MANBECK, JR.

Commissioner of Patents and Trademarks

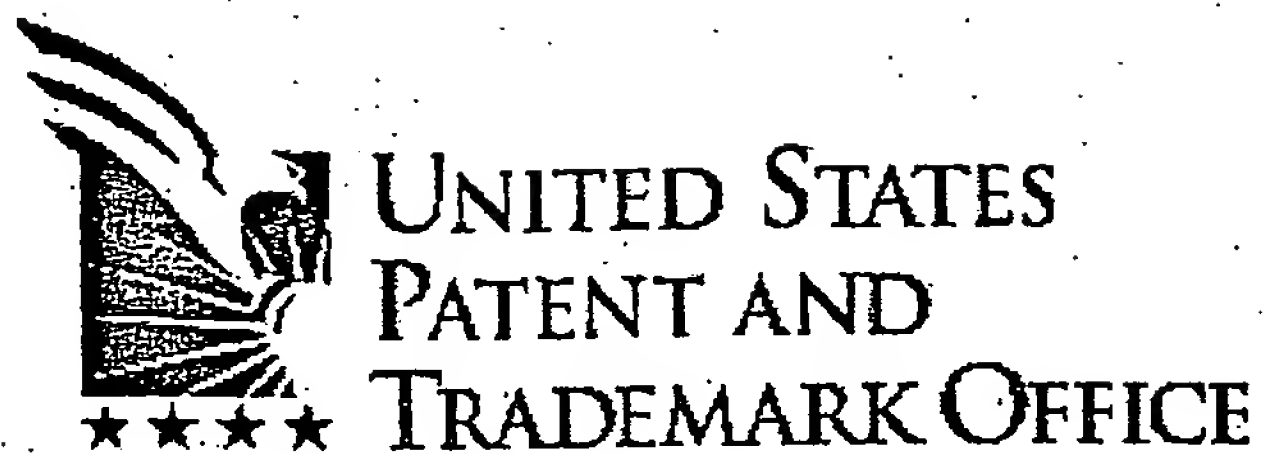
Attest:

*Mary F. Allen*

Acting Officer

## **EXHIBIT 5**





Patent Maintenance Fees

12/11/2001

<b>Patent Number</b>	4818816	<b>Issued</b>	04/04/1989	<b>Application Number</b>	07115593	<b>Filed</b>	10/26/1987	
<b>Status</b>	4th, 8th and 12th year fees paid						<b>Small Entity</b>	NO
<b>Window Opens</b>	<b>Surchg Due</b>						<b>Expiration</b>	
<b>Fee Amt Due</b>	<b>Surchg Amt Due</b>						<b>Total Amt Due</b>	
<b>Fee Code</b>								
<b>Surchg Code</b>								
<b>Title</b>	PROCESS FOR THE ORGANIC SYNTHESIS OF OLIGOSACCHARIDES AND DERIVATIVES							

**Address for Fee Purpose**

SETH H. JACOBS  
DAVIS HOXIE FAITHFULL & HAPGOOD  
45 ROCKEFELLER PLAZA  
NEW YORK NY 10111

**Most Recent Significant Events (up to 7)**

2000/09/21 Payment of Maintenance Fee, 12th Year, Large Entity.  
1996/08/13 Payment of Maintenance Fee, 8th Year, Large Entity.  
1992/11/04 Payor Number Assigned.  
1992/09/23 Payment of Maintenance Fee, 4th Year, Large Entity.  
End of Maintenance History

[New Query](#)[Print](#)

JACOBS  
HOXIE FAITHFULL & HOPGOOD  
JCKEFELLER PLAZA  
YORK, NY 10111

DATE MAILED  
11/04/92

## MAINTENANCE FEE STATEMENT

The data shown below is from the records of the Patent and Trademark Office. If the maintenance fees and any necessary surcharges have been timely paid for the patents listed below, the notation "PAID" will appear in column 10, "status" below.

If a maintenance fee payment is defective, the reason is indicated by code in column 10, "status" below. An explanation of the codes appears on the reverse of the Maintenance Fee Statement. TIMELY CORRECTION IS REQUIRED IN ORDER TO AVOID EXPIRATION OF THE PATENT. NOTE 37 CFR 1.377. THE PAYMENT(S) WILL BE ENTERED UPON RECEIPT OF ACCEPTABLE CORRECTION. IF PAYMENT OR CORRECTION IS SUBMITTED DURING THE GRACE PERIOD, A SURCHARGE IS ALSO REQUIRED. NOTE 37 CFR 1.20(k) and (l).

If the statement of small entity status is defective the reason is indicated below in column 10 for the related patent number. THE STATEMENT OF SMALL ENTITY STATUS WILL BE ENTERED UPON RECEIPT OF ACCEPTABLE CORRECTION.

ITEM NO.	PATENT NUMBER	FEE CODE	FEE AMOUNT	SUR CHARGE	SERIAL NUMBER	PATENT DATE	FILE DATE	PAY STY	YR ENT	STY
1	4,818,816	183	900	---	07/115,593	04/04/89	10/26/87	04	NO	PAID

*Pat. Uses*

If the "status" column for a patent number listed above does not indicate "PAID" a code or an asterisk (\*) will appear in the "status" column. Where an asterisk (\*) appears, the codes are set out below by the related item number. An explanation of the codes indicated in the "status" column and as set out below by the related item number appears on the reverse of the maintenance fee statement.

ITEM NO.	ATTY STY
1	11012.012

DIRECT THE RESPONSE TOGETHER WITH ANY QUESTIONS ABOUT THIS NOTICE TO:  
COMMISSIONER OF PATENTS AND TRADEMARKS, BOX M. FEE, WASHINGTON, DC 20231

*original*



08045/08001  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D. C. 20231

PAYOR NUMBER  
000761

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AUG 30 1996

75L9/0815

SETH H. JACOBS  
DAVIS HOXIE FAITHFULL & HOPGOOD  
45 ROCKEFELLER PLAZA  
NEW YORK, NY 10111

FISH & RICHARDSON PC

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AUG 30 1996

PRACTICE SYSTEMS

## MAINTENANCE FEE STATEMENT

The data shown below is from the records of the Patent and Trademark Office. If the maintenance fees and any necessary surcharges have been timely paid for the patents listed below, the notation "PAID" will appear in column 10, "status" below.

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If the statement of small entity status is defective the reason is indicated below in column 10 for the related patent number. THE STATEMENT OF SMALL ENTITY STATUS WILL BE ENTERED UPON RECEIPT OF ACCEPTABLE CORRECTION.

TM NR	PATENT NUMBER	FEE CODE	FEE AMOUNT	SUR CHARGE	SERIAL NUMBER	PATENT DATE	FILE DATE	PAY SML YR ENT STA
1	<u>4,818,816</u>	184	1990	----	07/115,593	04/04/89	10/26/87	08 NO PAI

\* No Docketing Required \*

Reviewed By Practice Systems  
Initials: *SAO*

Reviewed By Billing Secretary  
Initials: \_\_\_\_\_



## UNITED STATES DEPARTMENT OF COMMERCE

## Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

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M75N9

SETH H. JACOBS  
DAVIS HOXIE FAITHFULL & HOPGOOD  
45 ROCKEFELLER PLAZA  
NEW YORK NY 10111

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OCT 10 2000  
FISH & RICHARDSON, P.C.  
NEW YORK CITY OFFICE

## MAINTENANCE FEE STATEMENT

The data shown below is from the records of the Patent and Trademark Office. If the maintenance fees and any necessary surcharges have been timely paid for the patents listed below, the notation "PAID" will appear in column 11, "STAT" below.

If a maintenance fee payment is defective, the reason is indicated by code in column 11, "STAT" below. **TIMELY CORRECTION IS REQUIRED IN ORDER TO AVOID EXPIRATION OF THE PATENT. NOTE 37 CFR 1.377. THE PAYMENT(S) WILL BE ENTERED UPON RECEIPT OF ACCEPTABLE CORRECTION. IF PAYMENT OR CORRECTION IS SUBMITTED DURING THE GRACE PERIOD, A SURCHARGE IS ALSO REQUIRED. NOTE 37 CFR 1.20(h).**

If the statement of small entity status is defective the reason is indicated below in column 10 for the related patent number. **THE STATEMENT OF SMALL ENTITY STATUS WILL BE ENTERED UPON RECEIPT OF ACCEPTABLE CORRECTION.**

ITEM NBR	PATENT NUMBER	FEE CDE	FEE AMT	SUR CHARGE	SERIAL NUMBER	PATENT DATE	FILE DATE	PAY SML YR ENT	STAT
1	4,818,816	185	2910	----	07/115,593	04/04/89	10/26/87	12 NO	PAID

ITM  
NBR

1

ATTY DKT  
NUMBER

11512.A12

DIRECT THE RESPONSE TOGETHER WITH ANY QUESTIONS ABOUT THIS NOTICE TO:  
COMMISSIONER OF PATENTS AND TRADEMARKS, BOX M. FEE, WASHINGTON, D.C. 20231



01-37-02

Attorney Docket No. 80451

*COPIES*  
*[Signature]*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of: Maurice Petitou, et al.

Patent No.: 4,818,816

Granted: April 4, 1989

Serial No. 115,593

Filing Date: October 26, 1987

For: PROCESS FOR THE ORGANIC SYNTHESIS  
OF OLIGOSACCHARIDES AND DERIVATIVES  
THEREOF

Commissioner for Patents  
Box Patent Extension  
Washington, D.C. 20231

CERTIFICATE UNDER 37 C.F.R. 1.10(b)

Express Mail Label Number: EL676470495US

Date of Deposit: 1-29-02

I hereby certify that this paper is being deposited with the  
United States Postal Service "Express Mail Post Office to  
Addressee" Service on the indicated above and is addressed to:  
Commissioner for Patents, Box Patent Extension,  
Washington, DC 20231

Geraldine D. Stai  
Name

January 29, 2002  
Date

TRANSMITTAL OF APPLICATION FOR EXTENSION OF  
PATENT TERM UNDER 35 U.S.C. §156 AND 37 C.F.R. §1.740

Dear Sir:

Transmitted herewith in triplicate is an application for extension of term of the above-identified patent pursuant to 35 U.S.C. §156 and 37 C.F.R. §1.740.

Also enclosed are a Power of Attorney by the assignee, a Certificate under 37 C.F.R. §3.73(b), and a copy of the Subdelegation of Powers by the assignee together with an English translation thereof.

The Commissioner is hereby authorized to charge the fee of \$1,120 under 37 C.F.R. §1.20(j) and any other fee which may be required for receiving and acting upon the accompanying application for extension to Deposit Account No. 19-0091. A duplicate copy of this letter is enclosed.

Dated: January 29, 2002

Respectfully submitted,

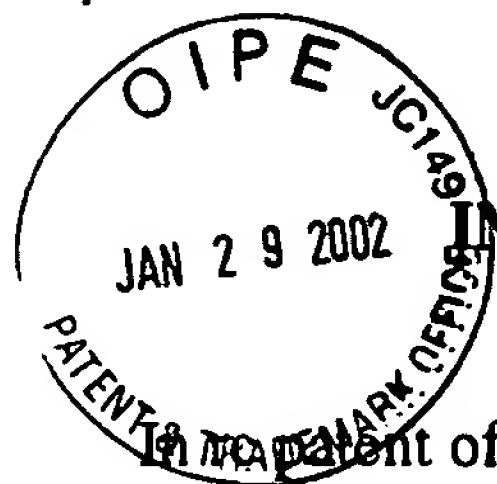
[Signature]  
Paul E. Dupont  
Agent for Applicant  
Registration No. 27,438

Address:  
Sanofi-Synthelabo Inc.  
9 Great Valley Parkway  
Malvern, PA 19355  
Telephone: (610) 889-6338  
Facsimile: (610) 889-8799

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent of: Maurice Petitou et al.

Patent No.: 4,818,816

Granted: April 4, 1989

Serial No. 115,593

Filing Date: October 26, 1987

For: PROCESS FOR THE ORGANIC  
SYNTHESIS OF OLIGOSACCHARIDES  
AND DERIVATIVES THEREOFAssistant Commissioner of Patents  
Box Patent Extension  
Washington, DC 20231

Dear Sir:

CERTIFICATE UNDER 37 C.F.R. 1.10(b)

Express Mail Label Number: EL676470495US

Date of Deposit: 1-29-02

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United States Postal Service "Express Mail Post Office to  
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Commissioner for Patents, Box Patent Extension,  
Washington, DC 20231

Name

Date

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POWER OF ATTORNEY

SANOFI-SYNTHELABO of 174, Avenue de France, 75013 Paris, France, the assignee of the entire interest in the above-identified patent, as evidenced by the chain of title set forth in the Certificate under 37 C.F.R. § 3.73(b) submitted herewith, hereby revokes all powers of attorney previously given and appoints Paul E. Dupont (Reg. No. 27,438) and Michael D. Alexander (Reg. No. 36,080), as its attorneys and/or agents to prosecute and transact all business in the Patent and Trademark Office connected therewith.

Address correspondence to:

Paul E. Dupont  
Sanofi-Synthelabo Inc.  
9 Great Valley Parkway  
Malvern, PA 19355

Direct telephone calls and faxes to:

Tel.: 610-889-6338

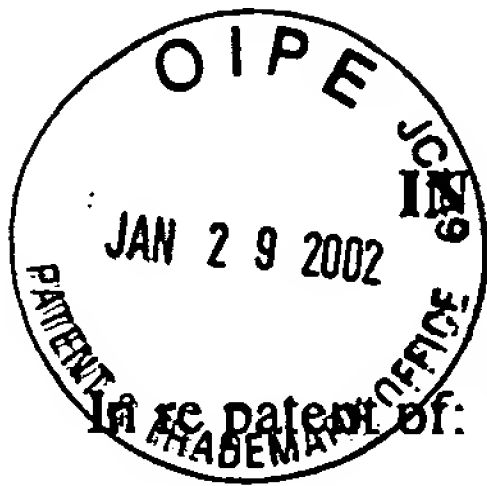
Fax : 610-889-8799

SANOFI-SYNTHELABO

Date: 18 Jan 02

By: John M. Spinnato  
John M. Spinnato





## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Maurice Petitou et al.

Patent No.: 4,818,816

Granted: April 4, 1989

Serial No. 115,593

Filing Date: October 26, 1987

For: PROCESS FOR THE ORGANIC  
SYNTHESIS OF OLIGOSACCHARIDES  
AND DERIVATIVES THEREOF

**CERTIFICATE UNDER 37 C.F.R. 1.10(b)**Express Mail Label Number: EL676470495USDate of Deposit: 1-29-02

I hereby certify that this paper is being deposited with the  
United States Postal Service "Express Mail Post Office to  
Addressee" Service on the indicated above and is addressed to:  
Commissioner for Patents, Box Patent Extension,  
Washington, DC 20231

Name Geraldine J. ShiDate January 29, 2002

Assistant Commissioner of Patents  
Box Patent Extension  
Washington, DC 20231

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OFFICE OF PETITIONS

Dear Sir:

**Certificate under 37 C.F.R. § 3.73(b)**

SANOFI-SYNTHELABO, a société anonyme of France, certifies that it is the assignee of the entire right, title, and interest in the above-identified patent by virtue of a chain of title from the inventors to the current assignee as shown below:

1. An assignment from the inventors Maurice Petitou, Jean-Claude Jacquinet, Pierre Sinay, Jean Choay, Jean-Claude Lormeau, and Mahmoud Nassr, to Choay, S.A. recorded in the Patent and Trademark Office at Reel 4954 Frame 0925 and Reel 5031 Frame 0859.
2. A merger of Choay, S.A. into Sanofi S.A. recorded in the Patent and Trademark Office at Reel 011641 Frame 0937-0942.
3. A merger of Sanofi S.A. into Sanofi-Synthelabo recorded at Reel 011641 Frame 0949-0961.
4. An assignment from Sanofi-Synthelabo to DROPIC recorded in the Patent and Trademark Office at Reel 011641 Frame 0547-0549.
5. An assignment from DROPIC to SANOFI-SYNTHELABO, a copy of which is attached hereto.



The undersigned has reviewed all the documents in the chain of title shown above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18, of the United States Code, and that such willful false statements may jeopardize the validity of the patent.

Date: 18 Jan 02

  
John M. Spinnato

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FEB 14 2002

OFFICE OF PETITIONS

## ASSIGNMENT

WHEREAS, SOCIETE CIVILE DE GESTION DE DROITS DE PROPRIETE INDUSTRIELLE CHOAY "DROPIC", of 36 rue des Sablons, 75116, Paris France, a "société civile", is the sole and exclusive owner, by assignment, of the Letters Patent of the United States of America No. 4,818,816, issued on April 4, 1989,

WHEREAS, SANOFI-SYNTHELABO of 174, Avenue de France, 75013 Paris, France, a company organized and existing under the laws of the Country of France (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the entire right, title and interest in and to said Letters Patent;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00) and other valuable consideration, the receipt of which is hereby acknowledged, SOCIETE CIVILE DE GESTION DE DROITS DE PROPRIETE INDUSTRIELLE CHOAY "DROPIC" by these presents do sell, assign, and transfer unto ASSIGNEE the entire right, title and interest for the territory of the United States of America, in and to the aforesaid Letters Patent and the invention described therein, and any reissue or reissues of said Letters Patent to the full end of the term for which said Letters Patent have been granted or reissues may be granted, said invention and Letters Patent to be held and enjoyed by the ASSIGNEE, and for the use and behoof of said ASSIGNEE, and for the use and behoof of their successors, assigns or other legal representatives, and for claims for damage by

reasons of infringement past and present, as fully and entirely as the same would have been held by us had this Assignment and sale not been made.

IN TESTIMONY WHEREOF, SOCIETE CIVILE DE GESTION DE DROITS DE PROPRIETE INDUSTRIELLE CHOAY "DROPIC" has caused these presents to be signed by its officer thereunto duly authorized.

SOCIETE CIVILE DE GESTION DE  
DROITS DE PROPRIETE  
INDUSTRIELLE CHOAY "DROPIC"

Date: January 15, 2002

By: [Signature]

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Pierre WILLAIME

General Manager



## SANOFI-SYNTHELABO

Société Anonyme au capital de 1 461 174 016 €  
Siège social : 174, avenue de France 75013 PARIS  
R.C.S. PARIS B 395 030 844

---

### SUBDELEGATION DE POUVOIRS

**RECEIVED**

FEB 14 2002

OFFICE OF PETITIONS

Monsieur Jean-Pierre KERJOUAN demeurant 3, avenue Boudon 75116 PARIS

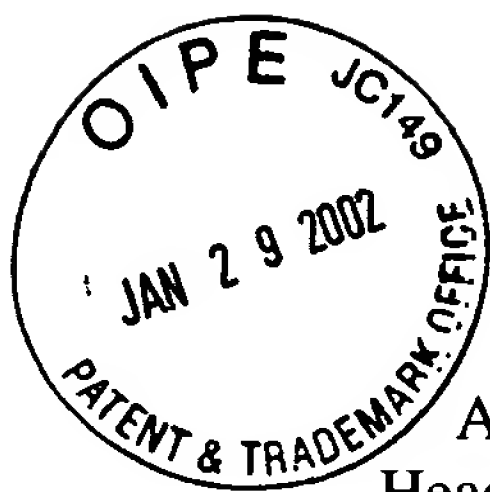
General Counsel et Directeur Juridique, dûment habilité à l'effet des présentes par délégation de pouvoirs en date du 19 mai 1999 de Monsieur Jean-François DEHECQ, Président du conseil d'administration de la société SANOFI-SYNTHELABO, société anonyme au capital de 1.461 174 016 €, ayant son siège social 174, avenue de France 75013 PARIS, immatriculée au Registre du Commerce et des Sociétés de Paris sous le numéro 395 030 844

subdélègue à John SPINNATO, Senior Vice President and General Counsel de SANOFI INC (Etats-Unis), afin qu'il en fasse usage au nom et pour le compte de la société SANOFI-SYNTHELABO, les pouvoirs de signer tout document nécessaire au dépôt, à la conservation et aux autres procédures relatives aux marques et, d'une façon générale, à réaliser toutes opérations concernant la Propriété Industrielle et, généralement, faire le nécessaire.

Fait à PARIS, le 5 août 1999

John SPINNATO

Jean-Pierre KERJOUAN



## **SANOFI-SYNTHELABO**

A corporation with € 1,461,174,016 in capital  
Headquarters: 174, avenue de France 75013 PARIS  
Paris Trade Register No. B 395 030 844

---

### **SUBDELEGATION OF POWERS**

Jean-Pierre Kerjouan, residing at 3, avenue Boudon 75116 PARIS,

General Counsel and *Directeur Juridique*, duly authorized to sign this document by the delegation of powers dated May 19, 1999 from Jean-François Dehecq, President of the Board of Directors of SANOFI-SYNTHELABO, a corporation with € 1,461,174,016 in capital, headquartered at 174, avenue de France 75013 Paris, and registered in the Paris Trade Register as number 395 030 844,

subdelegates to John Spinnato, Senior Vice President and General Counsel for SANOFI INC (United States), for him to use in the name of and on behalf of SANOFI-SYNTHELABO, the powers to sign any document necessary for filing, retaining, and executing any other procedures related to trademarks, and in general, to performing any operations concerning patent rights and generally doing what is necessary.

Executed in Paris on August 5, 1999

[signed]  
**John Spinnato**

[signed]  
**Jean-Pierre Kerjouan**

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**FEB 1 4 2002**

**OFFICE OF PETITIONS**